

CHAPTER I

INTRODUCTION

The present thesis deals with the tombs and burials so far uncovered at the archaeological site of Lambityeco, located in the Valley of Oaxaca, Mexico (Fig. 1). Specifically, it presents the data from the osteological analysis of the human remains and attempts to reconstruct the archaeological context in which the tombs and burials were found. The data presented here constitute the first step of a more extensive study that will aim at exploring a number of aspects of prehistoric Zapotec society. For this reason, this thesis will limit itself to a general description of a variety of archaeological data from Lambityeco.

The Study of Prehistoric Societies

The study of past social structures has been accomplished through the analysis of various kinds of archaeological materials such as stylistic attributes in ceramics (Longacre 1964; Deetz 1965; Whallon 1968), burial practices (Brown 1971; Autry 1973; Winter 1974a; Tainter 1975, 1977; Sempowski 1981; and others), or settlement patterns (Willey 1956; Bullard 1962; Blanton 1978). These approaches have been useful in studying different structural levels that range from the purely local (e.g. kinship), to the community or the regional level. The particular aim of the present study--which by the local nature of the data cannot treat the regional sphere--has been approached through the analysis of data related to burials. The fundamental premise of such attempt, and obviously of archaeology itself, is that the human behavior responsible for the archaeological record was not random, allowing us to understand how past societies

were structured (Binford 1971:2). In our particular case, instances of mortuary behavior should therefore lead to an understanding of certain aspects of Zapotec society as reflected at Lambityeco.

It should be noted that much of the total range of mortuary behavior is such that a society can display do not necessarily leave any archaeological evidence.

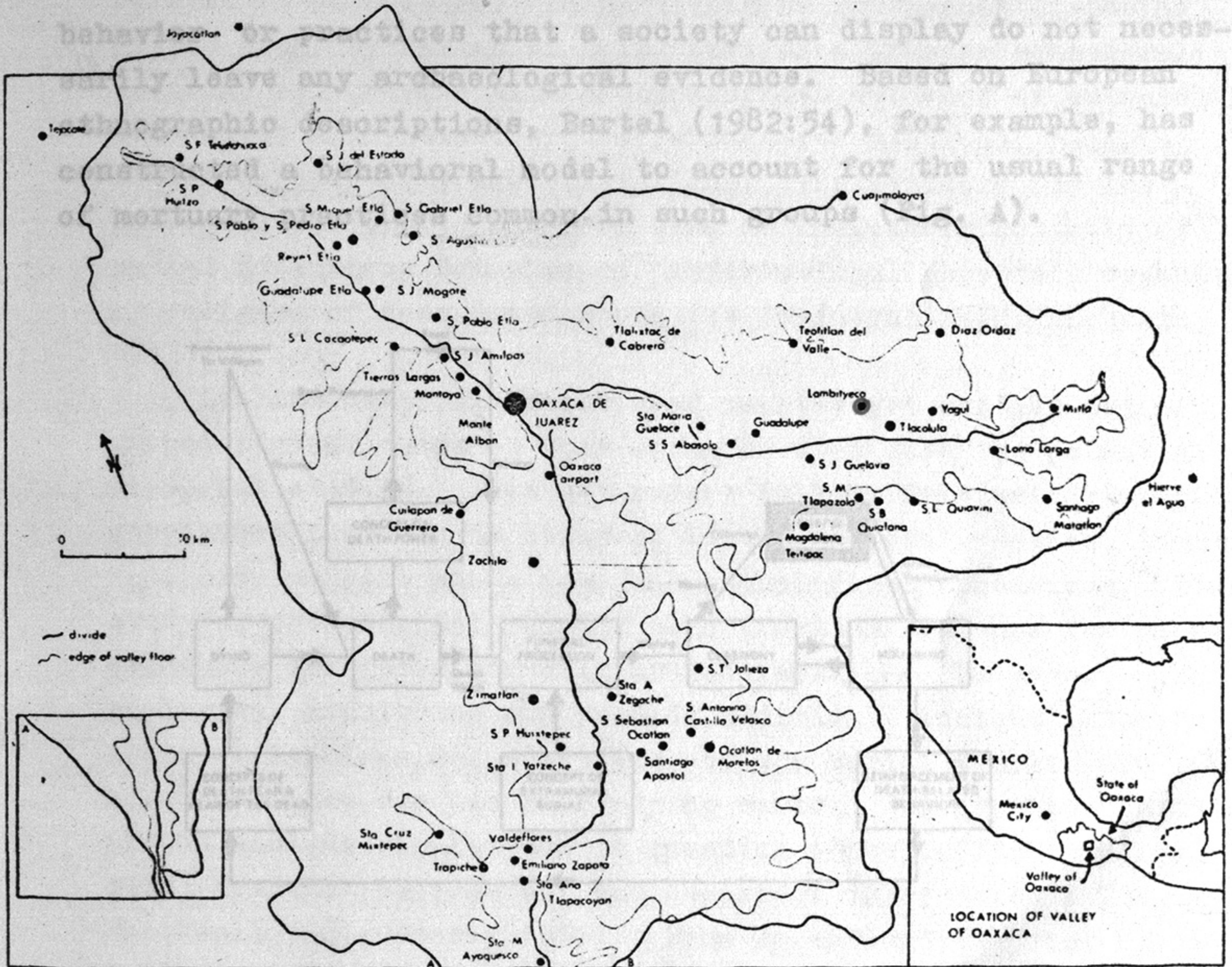


Fig. 1- Geographical location of Lambityeco within the Valley of Oaxaca [Inset: within Mexico] Taken from Kirkby 1973.

Even though this model should be modified in certain ways in order to reflect the range of mortuary behavior that is prevalent today in Middle America, or that was observed at the time of the Spanish contact, the data used in the present study is restricted to the 'disposal of the dead', considered by Bartel as "that part of the sequence which is

were structured (Binford 1971). In our particular case, instances of mortuary behavior should therefore lead to an understanding of certain aspects of Zapotec society as reflected at Lambityeco.

It should be noted that much of the total range of mortuary behavior or practices that a society can display do not necessarily leave any archaeological evidence. Based on European ethnographic descriptions, Bartel (1982:54), for example, has constructed a behavioral model to account for the usual range of mortuary practices common in such groups (Fig. A).

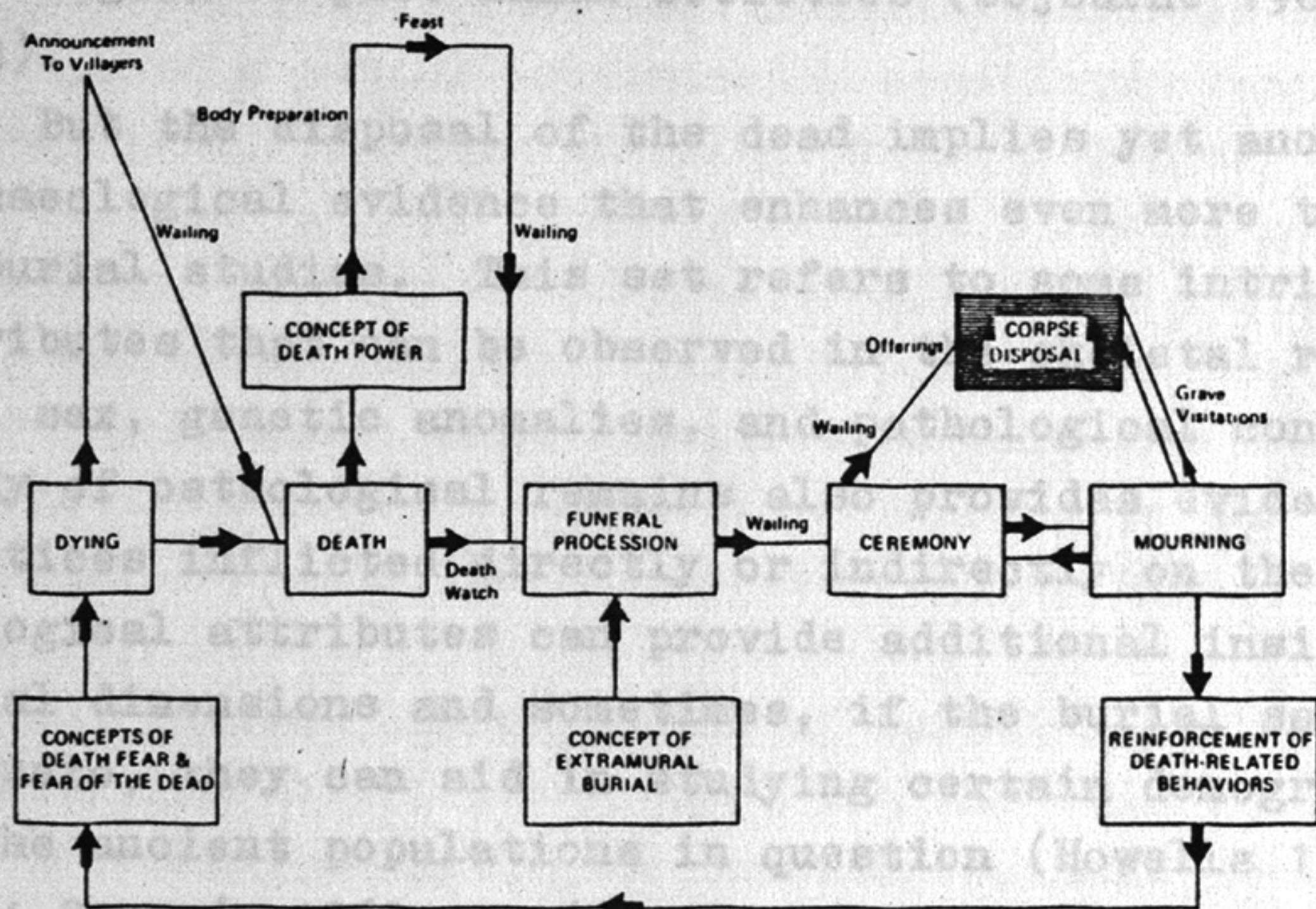


Fig. A- Model of the total range of behavior related to mortuary practice. Taken from Bartel (1982)

Even though this model should be modified in certain ways in order to reflect the range of mortuary behavior that is prevalent today in Middle America, or that was observed at the time of the Spanish contact, the data used in the present study is restricted to the 'disposal of the dead', considered by Bartel as "that part of the sequence which is

archaeologically studied" (idem.). This small instance of a complex behavioral system is nevertheless of great potential in the study of different kinds of phenomena that are ultimately related to each other. In part this is so because disposing of the dead, by virtue of being part of a broader behavioral complex, can provide with archaeological evidence of culturally associated activities, e.g. offering presentations, handling of the corpse, or grave visitations. The evidence for the preceding activities has been used as indicators not only of social dimensions but also of 'informational aspects', especially religion of past human societies (Sejourné 1960; Alekshin 1983).

But the disposal of the dead implies yet another set of archaeological evidence that enhances even more the potential of burial studies. This set refers to some intrinsic biological attributes that can be observed in the skeletal remains, including age, sex, genetic anomalies, and pathological conditions. The study of osteological remains also provides evidence for cultural practices inflicted directly or indirectly on the bones. The biological attributes can provide additional insight into the social dimensions and sometimes, if the burial samples are adequate, they can aid in studying certain demographic aspects of the ancient populations in question (Howells 1960; Vallois 1960; Genovés 1969; Acsádi and Nemeskéri 1970; Weiss 1973; Brothwell 1981; Storey 1981). From an ecological point of view, demographic structures and their trends through time must bear an effect on the way the populations organize themselves socially, a goal achieved in turn through or by means of exchanges of information.

Burials can therefore be used to study demographic, social, and religious aspects of past human groups. However, any attempt to provide an explanation of how such diverse aspects were interrelated in prehistoric societies, and specifically at Lambityeco, necessarily requires an adequate contextual and chronological control of the burial series at hand.

Contextual Control

Contextual control refers to the need for studying the burials within a broader archaeological setting, or as component features of a broader unit of analysis. In the case of Oaxaca archaeology, their treatment as single and isolated features has provided only limited explanations of social phenomena.

The study of Oaxacan Formative deposits (1500 B.C.-A.D. 100) has led to the formulation of a unit of analysis in which burials are one of several features making up a broader, but archaeologically definable, behavioral context. This unit of analysis has been termed the 'household cluster', and is defined in terms of a set of consistently associated features, separated in turn from other similar clusters of features. As the term implies, the referred features reflect domestic activities and include the remains of a house, bell-shaped storage and trash pits, and human burials (Winter 1974b, 1976). It should be stressed, however, that Formative burials are not restricted to domestic contexts, and have been found so far in at least two clearly identified cemeteries (Whalen 1976, 1983; Flannery 1983a:45).

Our present understanding of burial contexts for the Post Formative periods is very poor, but the domestic setting might have prevailed up until the Spanish contact. However, by later periods in the prehistory of the Valley of Oaxaca, contexts other than the household or the cemetery are clearly reflected in the archaeological record.¹ Tombs appear under Plaza Complexes, for example, at Yagul (Bernal 1966:353) and Mitla, or under temples, as tomb 7 at Monte Albán (Caso 1969:Plano IIa).

At Lambityeco, several features reflecting domestic activities have been found consistently associated, including the remains of houses, sweat baths (*temazcales*), tombs, graves, and other miscellaneous facilities. Accordingly, the concept of household cluster seems an appropriate unit of analysis for the present purpose of understanding the burials within a broader contextual framework.

However, Flannery has recently proposed that the concept of household cluster² should not be stretched on later periods other than the Early and Middle Formative (1500-500 B.C.), adding that:

[The term]... should not be extended to large adobe residences, houses with courtyards, or palaces. Such residential units have different modes of storage, different set of activities, and different personnel, and these differences are only obscured by overextensions of the term (1983:45, 133).

Concepts, nevertheless, are useful precisely because by connoting more, they denote less. The concept of household cluster refers to a universally occurring unit (Winter 1974b:981), a unit in which basic human activities are carried on irrespective of the size, shape, or construction materials of the residential structures contained within it. On the other hand, there is no doubt that the household units from Monte Albán IIIB-IV phase at Lambityeco (550-800 A.D.)--as well as in other contemporaneous sites in the Valley of Oaxaca--differ from the Formative household cluster. Such differences, as reflected at Lambityeco, are evident not only in terms of internal composition, but also in terms of their size, intra and inter-spatial relations, and the range of variation present within the community.

Our present knowledge of household units at Lambityeco is poor since the excavation strategies have not been framed within such units of analysis. As a result, none of the household clusters defined as such in this study has been spatially defined in their entirety. Except for the excavation of a couple of mounds, which exposed some of the superimposed houses contained therein, the other excavations at the site have consisted mainly of stratigraphic pits, large and narrow trenches, or restricted salvage operations.

Another contributing factor to our lack of knowledge about the Lambityeco household units is the still needed study of the available remains using other units of analysis such as the

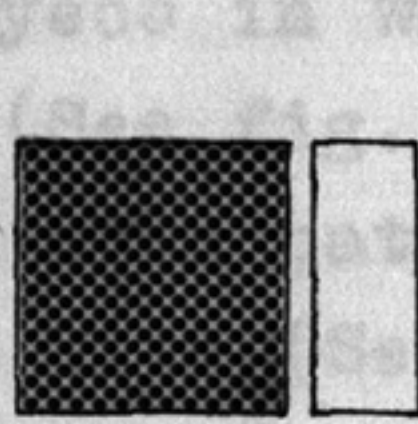
activity area and male and female work areas (Flannery 1976a:5). Much work needs to be done in the analysis of many features within the clusters, including hearths, trash pits, possible ovens, and offerings.

It is for these reasons that in some cases, the concept of household cluster might have been read into the data, and a major weakness in the present attempt of viewing the burials within a broader context might be indeed, an overextension of the concept. Nevertheless, at this stage in our understanding of the Lambityeco material, the concept of household unit has been extremely useful in making sense of the excavated remains.

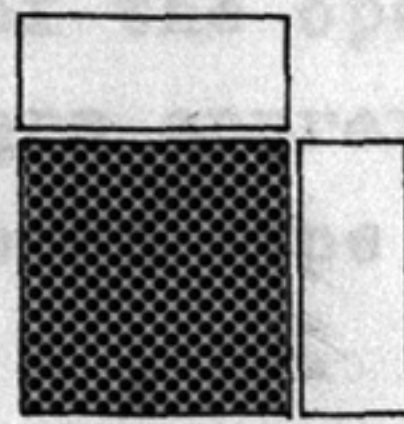
Even though not all the component features listed above have been found in a single household cluster at Lambityeco, tombs seem to be particularly associated with houses. In some cases, they have been used as indicators for the presence of a residential structure, and therefore of a household unit, even though evidence for the house was not found (or looked for?). In the case of household units defined in terms of scanty evidence, a simple heuristic argument was followed: even though it cannot be proved conclusively that they in fact reflect households, there is no evidence suggesting that they couldn't have been. Isolated burials, however, were not used as indicators for the presence of a household cluster, as Flannery has suggested (1983a:45). Although some data seem to indicate that a cemetery might not be present in the site, the possibility of supra-household contexts for some burials cannot be ruled out, and therefore, the existence of a household unit derived from isolated burials might be indeed misleading.

Comparing then the Formative household clusters to the Lambityeco ones in terms of internal composition, the latter consistently include tombs, usually under the east room of houses. In addition, some of the Lambityeco household units contain *temazcales*, which until now, have not been identified anywhere else in the Valley. Also, the absence, so far, of bell-shaped pits points to other means of storage, or to differ-

ential subsistence activities (i.e. specialization). The excavated houses present wide variations, which are, nevertheless, differences of a basic concept in residential spatial distribution. This basic concept has been termed Patio Complex, and refers to an open³ squared patio surrounded by rectangular rooms built along its sides. Houses, or Patio Complexes, vary then depending upon the number of rooms around the central open patio and in their overall dimensions. Based on the first criterion, the following general types⁴ were established:

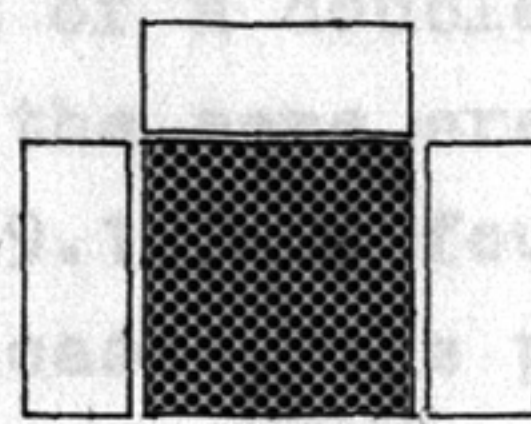


Open type

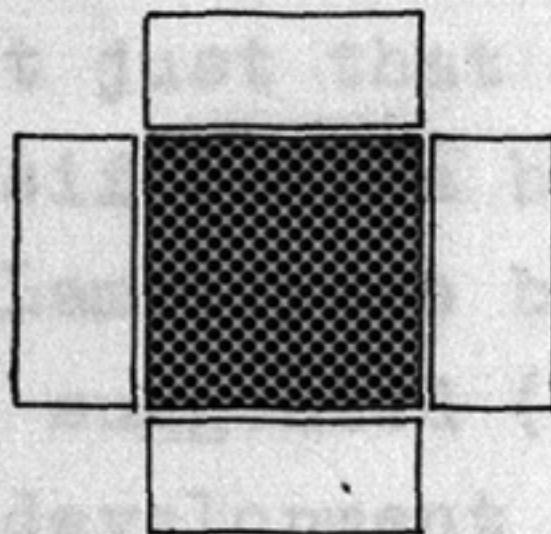


A

Semiclosed type

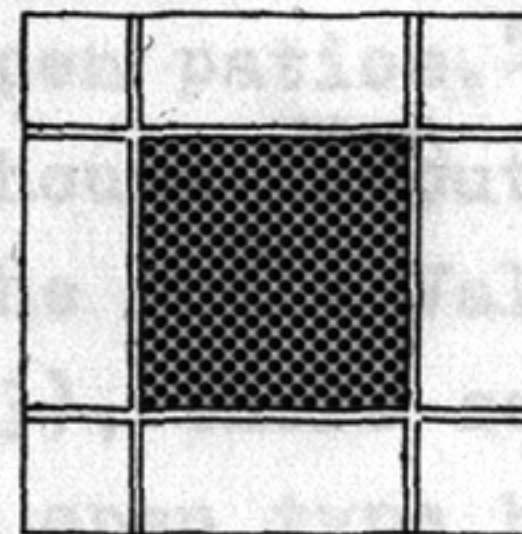


B

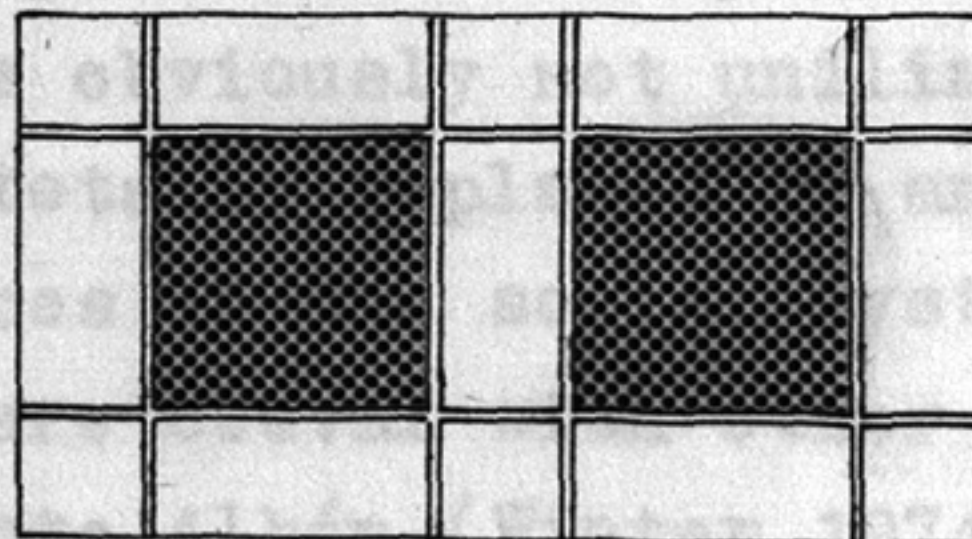


A

Closed and single-compound type



B



Closed and double-compound type

This classification differs from Winter's (1974b) because it just applies to the houses, or Patio Complexes, and not to the entire clusters. Therefore, even though the whole household units might have been closed, i.e. with defined boundaries, the house within them could have been of the open, semiclosed, or closed type.

Based on the criterion of patio size, Winter (ibid.) established a further breakdown of closed types (not including double-compound structures), and even though there tends to be a correlation between patio size and house layout--with an increase in patio dimensions from the open to the closed types--, this is not always so. For example, there is one case at Lambityeco in which one of the open patios of a double-compound house (See fig. 13a) covers approximately the same area (20.25m^2) as the open patio of an open type house (19.12m^2) found also at the site (See fig. 16 a top). In both cases, the patio area falls within the modal size of a type 2 cluster (house) in Winter's typology. In terms of the residence's layout, however, type 2 clusters (houses) correspond to the single-compound type. Perhaps then, a typology of residential structures based on the criterion of size should consider the total area covered by the houses and not just that of the open patios.⁵

The classification based on house layout seems to be valid not only for Lambityeco but for the whole Valley of Oaxaca and, as Winter has suggested (1974b:983), there seems to be an evolutionary development from the open type house to the double-compound residence. The latter, in turn, seems to be a predecessor to the closed and multi-compound structure, exemplified by the Yagul palace (Bernal y Gamie 1974). This evolutionary development is obviously not unilineal in the sense of one type house being totally replaced by another. Instead, it reflects differences in the social system, so by later times, open type houses are coeval with other types of residences, as is the case at Monte Albán (Winter 1974b) and at Lambityeco.

Except for the double-compound type structure, the others

have been found in several Valley sites, especially at Monte Albán (*idem.*). At Lambityeco, two series of superimposed double-compound residences have been clearly identified--mounds 195 and 190 (Fig. 3)--, and at least in the case of the former, the sequence is preceded and ended by closed and single-compound structures. The only other possible case of a double-compound house so far excavated, but not exhaustively studied, seems to be the structure on top of the East Platform at Monte Albán (cf. Caso, Bernal, y Acosta 1967: 441). Unfortunately, no stratigraphical profile of the plan is provided, but the last phase of construction seems to consist of two adjacent Patio Complexes that, however, do not seem to be directly connected. Nevertheless, at Lambityeco, a similar case with an indirect access between the annexed Patio Complexes, occurs (See fig. 6a). Even though highly speculative, a *temazcal* with several phases of construction and about 11 meters north of the larger Patio Complex--in the center of the East Platform--might also be present. This possible double-compound residence differs from the Lambityeco ones by its monumentality. Besides being on top of a large platform with three staircases, the overall area covered by the structure is about twice as the area of the Lambityeco residences. Whereas houses 3 and 4 of mounds 195 and 190 cover respectively 370 and 397 m² (Lind and Urcid 1983), the structure on top of the East Platform at Monte Albán covers approximately 749 m².

The double-compound structures reflect other activities not restricted to the domestic realm. But even though a diversification of activities occurred in them, the residential function would still allow us to consider them as houses, and the whole context in which they occur, as household units. The other functions of these structures, which apparently took place in the larger Patio Complexes of each double-compound, include gubernatorial and religious ones (Flannery 1983b:133; Lind and Urcid 1983).

As already mentioned, the sequence of superimposed double-

compound houses in mound 195 at Lambityeco is covered by a single-compound structure that rests on top of a large pyramidal platform. Adjacent to the platform is a Plaza Complex that repeats, conceptually, the layout of the house on top of the platform (See fig. 9a). This general layout is similar to the spatial arrangements defined as 'systems', which occur at Monte Albán--systems M and IV-- and at Guiengola (Peterson and MacDougall 1974: 14-15). However, the Lambityeco system differs from the others not only in overall dimensions, being the smaller of all of them, but also by the fact of having a residential structure on top of the pyramidal platform.⁶ The Plaza Complex at Lambityeco seems to have been intended for civic, administrative, and/or gubernatorial functions, and therefore, the whole system might be considered as analogous--in terms of its functions--as the preceding double-compound houses beneath the pyramidal platform. To this extent, it has also been considered within the conceptual framework of 'household unit'.

Considering the materials used in the construction of the Lambityeco houses, adobe blocks over stone foundations seem to have prevailed. However, the possibility of wattle-and-daub structures cannot be eliminated. Even though the appearance of adobe block construction has been dated approximately by the Middle Formative (Flannery 1976b:24), we still lack data as to how long did the use of wattle-and-daub persist. Following Flannery (ibid.), we might hypothesize that by Post Formative times the wattle-and-daub materials continued being used in correlation--although not exclusively--with the open type and probably even semiclosed type structures, in which at least one of the two or three adjacent rooms might have been of these materials. This might explain why at Lambityeco, some of the houses' rooms were not found (i.e. they were missed).⁷ The open central patios of the houses were mainly plastered, but some cases of earthen floors associated with possible adobe rooms of semiclosed houses also occur.⁸

Except for the consistent appearance of tombs under the

houses, usually beneath the east room, no other general patterning in the spatial arrangement of the different features composing a household unit has emerged, but in terms of spacing between clusters there might be a tendency for nucleation in the community, which according to the surface survey, covers nearly 65 hectares (Peterson 1976). Whereas contemporaneous Formative household units were separated by open areas between 20 and 40 meters (Winter 1974b:982; 1976:25), the houses of a couple of household clusters at Lambityeco are separated by 15 meters, and others probably by even less than that. Such nucleation might not be evident in the survey map of the site (Figs. 2 and 3), but seemingly contemporaneous houses, and therefore household units, have also been found in the flat areas between mounds. Since Lambityeco is located in relatively flat terrain, the concentration of household units might be even greater than at Monte Albán, where topographical features must have been a major factor influencing wider spacing between clusters. Besides an apparent tendency for nucleation, there is evidence of formalization in terms of the structures' orientation. All the architecture so far uncovered at the site is consistently aligned 17° east of north.

Regarding the variations in household activities within the community, there is evidence of a wide range of specializations. So far, the houses of rulers (*coquis*), of priests (*bigañas*), of servants to the *coquis* (*golabas*), and of salt producers, have been clearly identified at Lambityeco (Peterson 1976; Lind and Urcid 1983). In addition, the presence of unfired objects in tomb 2 (Paddock, Meger, and Lind 1968) and the identification of a clay source in the vicinity of mound 190 (Payne 1970) suggests the production of pottery in the community.

Chronological Control

The other necessary requirement in the use of burial data to infer social, demographic, and religious aspects of prehistoric

societies is chronological control. Moreover, in order to study processes of change through prolonged periods, which according to Plog is the major potential of archaeology (1974: ix, 11), it is necessary to focus first on a series of points through time, and hence to control the time variable. When studying prehistoric societies, this kind of control is important in order to determine which of the observed variations in mortuary patterns are due to differences within the social system prevailing at a specific period, and which are due to differences that result from the varied chronology of burial placement. The same is true when attempting to reconstruct demographic profiles. Howells, for example, has commented:

Archaeological demography, on the other hand, suffers from the inability to control these very things, circumscription of the group and contemporaneity.

Thus a constant and major problem in archaeology is to know, from all the evidence, how many people were present at one time, not simply how many contributed to all the rubbish, or how many eventually got into a cemetery (1960: 158-159).

But what should be the required degree of contemporaneity necessary to establish non distorted--chronologically--demographic and social patterns? In other words, should our chronological control be within the range of 50, 150, 250, or 500 years?⁹

Even though the surface survey conducted at Lambityeco reveals its more or less continued occupation from the Middle Formative (700 B.C. [Rosario phase]) until modern times (Peterson 1976), the area from which the burials have been recovered seems to have been occupied beginning at around 550 A.D., with a major abandonment by the end of the 8th century. Dated post-abandonment activities in at least one mound indicates occupation at around 1100 A.D., but it seems that by that time, such occupations were rather sparse and probably even sporadic.

The major abandonment of Lambityeco most certainly was--

as in the case of Monte Albán--a slow process rather than a sudden event, which, however, might have taken place in less time than that at Monte Albán simply because of the size of the population involved.¹⁰ As a result, it cannot be assumed that all the burials found until now in non post-abandonment contexts date necessarily to the major occupation of the site (A.D. 550-800).¹⁰

Based on mortuary data from the tombs, an attempt at establishing minimum years of occupation not only for the tombs themselves, but for the houses associated with them and therefore to the corresponding household units, has been developed (Lind and Urcid 1983). Such estimations are based on the assumption that only household heads (husband and wife) of each generation, were buried in the "family" tomb. Therefore, from the minimum number of adult individuals determined for each of them and assuming an average of 30 years per generation, an approximate minimum number of years of occupation is obtained. If these assumptions are correct, the longest occupation of a tomb at Lambityeco (tomb 2) is of 120 years. The stratigraphical sequence of three tombs in mound 195 provides a minimum estimation of 150 years of occupation and formation of the mound.¹¹ Since the last phase of construction in it has been consistently dated--by C14 and archeomagnetism-- at ca. 700-750 A.D., this would place the beginning of occupation in that locality at ca. 650-700 A.D.

Since the stratigraphy at the site is artificial, i.e. man-made, and the number of superimposed strata varies at each mound or flat area, the correlation of the stratigraphical sequences of most of the localities that have yielded burials, has been impossible.¹² Moreover, the extremely reduced sample of tombs and non-tomb burials with offering lots (10 in each case)¹³ has not permitted the use of seriation techniques.

Even though some crude attempts at seriating the tombs--based on qualitative and not so much on quantitative measurements--have been done, the whole problem of chronological control

for the burials still requires further analysis (and more data). For the present purpose, however, it can be concluded that the burial series from Lambityeco is chronologically homogeneous if viewed in terms of the whole cultural sequence for the Valley of Oaxaca, and that finer chronological control within the actual span of approximately 650 years is still needed.¹⁴

Analysis on the Household Level

The purpose of this analysis has been only to define the household units. Since much work remains to be done on many of their component features, the analysis is obviously of a preliminary character. As already discussed, this preliminary attempt was geared toward providing a broader context for the burials.

The presence at Lambityeco of superimposed household clusters¹⁵ made necessary, first, the determination of the association between specific features--primarily burials and tombs--within a household unit, of their stratigraphical sequence, and as much as possible of the clusters' layouts. The interpretations about most of them are mainly based on field data directly related to the tombs and burials. The Exception to this are the household clusters from mound 195, especially of the houses within them. Their architecture has been exhaustively studied by Lind (1983), and their presentation here rests basically on his work. For the rest of the household clusters in other mounds and flat areas, the interpretations should therefore be considered as tentative. This is especially the case of mounds 190 and 91 (See fig. 3). The archaeological remains of the former are extremely complex, and the excavations for recovering some of them were accordingly complex. Time limitations did not allow, therefore, to make a comprehensive study of its materials. Although the sequence of superimposed houses in this mound, and their architecture, had been previously worked out by Potter (1974), the non-correspondance of his

interpretations with the partial--east--profile of the mound made by Mogor (cf. Paddock et al 1968:4-5), made a reinterpretation necessary in order to plot the burials more accurately according to their corresponding residential structure. Even though many of the details on the stratigraphical sequence in the west side of the mound were not worked out to my complete satisfaction, the interpretations regarding the east side adhere to Mogor's profile.¹⁶

The tentativeness in the interpretations of the household units in mound 91 is mainly because of a lack of appropriate data. The excavation of the mound was done without good stratigraphical control and when relevant data was recovered, it is usually characterized by inconsistencies and even contradictions.

When working with the burials and tombs as smaller analytical units, several problems were encountered in establishing the certainty of an associated object as part of the offering. In the case of burials, this was especially so with those found already disturbed. In such cases, uncertain offerings were not considered for further analysis. In the case of tombs, the provenience of some objects seem to be more accidental than purposeful. The building of these mortuary facilities within or below construction fill made inevitable the mixing of original offerings, some of which became broken through time, with fragmentary objects that formed part of the fill. Due to the nature of the latter, which in some cases was evidently obtained from former trash deposits, certain kinds of incomplete and isolated objects were consistently not considered as part of the offerings, including figurine and obsidian fragments, isolated sherds and faunal remains, and carbon samples.

Figurine fragments. Even though they sometimes appear inside the tombs or associated with the non-tomb burials, not a single complete figurine was found. Judging from the state of preservation of the mortuary offerings, especially in undisturbed contexts, it appears that intentional breakage of objects was not part of the mortuary ritual, at least not

within the behavioral units directly related to the disposal of the dead. Whereas the figurines abound on the surface of the site and within the construction fill, they are conspicuously absent, relative to other kinds of objects, in the burials' offerings.

Obsidian fragments. Since obsidian artifacts were used as offerings, especially in those placed with the tomb's burials, there is no doubt that some of the obsidian fragments are the result of accidental breakage upon the consecutive use of the tombs. However, most of the obsidian found at Lambityeco--which is not very abundant--comes from construction fill (Lind, for personal communication). Some of these fragments could have made their way into the tombs through accidental placement--as when excavating in order to reach the tomb's entrance--, through natural deposition, or through animal disturbances. Except for relatively large pieces or fragments that, by their color and form, could have made up a single artifact, the other fragments were not considered as offerings.

Isolated sherds. As with the obsidian, there is no doubt that some isolated ceramic fragments, especially those in the outside offerings of tombs, are the result of unintentional breakage and accidental removal. But broken ceramics are also part of the construction fill and their presence in the tombs could be accounted for in terms of those processes discussed for obsidian fragments. Therefore, single sherds or a very small amount of tiny sherds were not considered as part of offerings.

Isolated faunal remains. This was the least problematic category, since it was usually easy to distinguish those faunal remains deposited as offerings from those that were of accidental provenience.

Carbon samples. This is an important category for the archaeologists, but from an emic point of view it might not be so. In fact, we can assume that burned organic material cannot be an offering, per se, but rather the by-product of an offering (usually attested by the container where the burning took place).

At any rate, carbon fragments are also frequently found within the construction fill.

Appendix B contains a list of all the objects that were defined as offerings in the field, but that were not considered as such upon the analysis of tombs and burials because of the reasons already explained. Since some of these could have been intended as offerings, the total number of objects represented as having been in the tombs or with the non-tomb burials is simply an approximation or minimum count.


























































When analyzing the tombs, where most of the offerings were disturbed, the presence of composite objects--which refer, for example, to necklaces or bracelets made up of several pendants and/or beads, or to ceramic containers with lids and covers--imposed another problem when attempting a quantitative approach. Only when there were clear indications of which items could have made up a composite object, these were counted as single artifacts. Such instances include, for example, spatial proximity or similarity, as in the case of pendants made from a single animal tooth. Table 1, however, presents an inventory--broken down into several categories--of the objects found in the tombs without considering the problem of composite objects. In chapter 2, the possible cases of such objects are discussed in more detail, and the resulting final counts are presented.

The Osteological Analysis

This section deals with the methods used in the biological analysis of the burials and with the evaluation of the burial sample before the data is presented within its archaeological context.

The analyzed sample comprises 75 burials that yielded a total of 88 individuals.¹⁷ However, due to the poor condition and incompleteness of several skeletons, only 3/4 of the sample could be aged and/or sexed. In general, the state of preservation of the skeletal remains was poor, especially those from the tombs, where most of the bones were fragmented and some of the individuals represented only by few anatomical sections.

Table 1.- Categories of objects present in tombs

Object category	Ceramic forms	Tomb 6	Tomb 6	Tomb 1	Tomb 1	Tomb 2	Tomb 2	Tomb 3	Tomb 3	Tomb 4	Tomb 4	Tomb 8	Tomb 8	Tomb 9	Tomb 9	Tomb 10	Tomb 10	Tomb 11	Tomb 11	Tomb 12	Tomb 12	Totals
		Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	
Urns		7					5	1					1								1	15
Human effigies		1																				1
Jaguar effigy vessels		2					1															3
Bipod effigy floreros		4					1	1				1										7
Bat-claw vessels						1								1		1					1	4
Double-cup vessels		1	1														1					3
Conical cajetes		13	24	7	5	21	20		13		4	1	7	13	1	4	1	4	18	1	8	165
Tripod conical cajetes						3	1					7	7		1							19
Semihemispherical conical cajetes							1															1
Tripod hemispherical cajetes													1									1
Hemispherical cajetes		1											1									2
Semihemispherical cajetes with handles							1															1
Dishes												1			1							2
Flanged neck vessels		1																	1			2
Tecomates with or without handles			2																			2
Ollas							1		3										1			5
Patojos			1																			1
Sahumadores		8	4	3		4		1	1			1		3		1		9		1	36	
Braseros		4																				4
Incense burners (ollita shape)		1	1																			2
Vases												1										1
"Candeleros"							1															1
Miniature bat-claw vessels							2									1						3
Miniature conical cajetes			1				7							1					3			12
Miniature high-walled conical cajetes			3																			3
Miniature tripod cajetes			1																			1
Miniature semihemispherical high-walled conical cajetes							1															1
Miniature semihemispherical cajetes		1					1															2
Miniature hemispherical cajetes															1							1
Miniature cajetes with handles (covers)																			9			9
Miniature tecomates																			2			2
Miniature ollas																			9			9
Miniature sahumadores						1	3															4
Miniature braseros							3															3
Miniature vases																				4		4
Miniature pitchers			1				1															2
Miniature spouted ollas							1															1
Miniature cup vessels with lid			1																	1		2
Perforated ceramic disks		1	62				3															66
Ceramic cones							3															3
Ceramic balls			1				2															3
Modelled figurines							7															7
Bone spatulas			5				15												22			42
Carved bones							1												4			5
Bone awls							2												1			3
Bone pins			3																			3
Bone needles			1				1												6			8
Bone disks							1															1
Shell rings		1																				1
Pendants		1	4											2		1			3			11
Beads		1	1				3								1				2			8
Carved stones		1																				1
Stone models									1													1
Stone balls					1									1								2
Manos			2						1													3
Polishing stones															1							1
Obsidian blades			1				2						2		1		1					7
Obsidian awls		2																				3
Mica															1							1
Domestic dogs			3				1						2		4		1					12
Birds			8				17														1	26
Petates		1				1																2
Reed mats			1																			1
Miscellaneous			4 ⁺		1 ⁺	1 ⁺	3 ⁺												1 ⁺			10
Totals		52	136	10	7	32	112	3	19	0	4	12	23	20	12	8	5	15	85	2	11	568
Totals by tomb			188		17		144		22		4		35		32		13		100		13	

⁺Tomb 6

- 1 - Plaster cover for perishable object
- 2 - Smoothed long bone fragment of bird
- 3 - Bracelet (?)
- 4 - Distal phalanx of *Odocoileus virginianus*

⁺Tomb 1

- 1 - Plaster fragment with design

⁺Tomb 2

- 1 - Semihemispherical stone object
- 2 - Vegetable stalk (fibers?)
- 3 - Turquoise plaque
- 4 - Lid with two perforations

⁺Tomb 11

- 1 - Circular and perforated plaster ornament

Even though comparatively more complete, most of the direct burials (i.e. non-tomb interments) were also fragmentary and/or eroded.

Factors accounting for the extremely fragmented and incomplete nature of the tomb's remains had to do with the prolonged and cumulative use of these mortuary facilities. The tombs are not spacious, and their continued use resulted in the shuffling and heaping of preceding burials in order to make room for the latest one. Even though these rearrangements were done in some cases with certain care, many bones--smaller ones in particular--must have been trod, becoming pulverized or at least broken. There is also evidence suggesting the partial removal of skeletons from the tombs upon residential shifts, probably including those occurred during the major abandonment of the site by the end of the 8th century.¹⁸ Besides continuous ancient disturbances, the tomb's remains have also been subjected to the effects of natural conditions, including water filtrations and insect disturbances (Plate 1).¹⁹

In the case of direct burials, the factors promoting their poor state of preservation include not only natural conditions, but ancient and modern disturbances as well. Since many burials were placed below residential structures, the rebuilding and modifications of the houses meant in some cases their partial or complete destruction and/or removal.²⁰ Modern disturbances include mainly destruction by plowing activities and, no doubt, looting.

Tables 2 and 3 provide quantitative data on the state of preservation of the tomb's burials. They give frequencies of anatomical sections and groups, obtained on the basis of the minimum number of individuals identified in each tomb. Table 4 provides the only available measurements on long bones. Some of these measurements were taken, however, *in situ*, and others pertain to pre-adult individuals.²¹ The conspicuous paucity of long bone metrical data attests for the fragmentary nature of the collection.

Table 2.- Frequencies of Bones present in Tombs

Anatomical section	Tombs						
	2	3	6	8	9	10	12
Skulls	85.7	100.0	66.6	60.0	57.1	50.0	66.6
Mandibles	100.0	80.0	33.3	60.0	57.1	25.0	66.6
Humeri	71.4	100.0	41.6	70.0	57.1	87.5	100.0
Ulnae	71.4	90.0	33.3	40.0	42.8	37.5	50.0
Radii	64.2	100.0	33.3	90.0	42.8	37.5	100.0
Carpals	18.7	65.0	25.0	32.5	25.8	04.6	20.8
Metacarpals	45.7	86.0	55.0	54.0	32.8	10.0	46.6
Hand phalanges	20.4	65.7	28.5	41.4	29.5	08.0	23.8
Femora	85.7	80.0	25.0	70.0	28.5	50.0	50.0
Tibiae	78.5	70.0	33.3	70.0	14.2	25.0	33.3
Fibulae	50.0	80.0	33.3	90.0	21.4	25.0	50.0
Tarsals	60.2	90.0	60.7	75.7	39.7	23.2	42.8
Metatarsals	74.2	94.0	78.3	76.0	32.8	25.0	43.3
Feet phalanges	26.5	40.7	33.9	47.8	31.1	07.1	38.0

Note: Frequencies calculated on the basis of seven individuals in Tomb 2, five in Tomb 3, six in Tomb 6, five in Tomb 8, seven in Tomb 9, four in Tomb 10, and three in tomb 12. Does not include all anatomical sections present in tombs.

Table 3.- Frequencies of Two Bone Groups present in Tombs

Anatomical group	Tombs						
	2	3	6	8	9	10	12
Long bones	70.2	86.6	33.3	71.6	34.5	43.7	63.8
Hand and Foot bones	34.5	66.7	40.8	50.7	31.4	11.0	33.6

Note: All measurements in centimeters

Key:

1. In situ measurements.

2. Measurement of reconstructed bone.

3. Measurement of shaft (without fused epiphysis).

As a result of the poor state of preservation remains, the method for ageing and sexing include osteometries and is based on observations on certain anatomical features used to estimate the age and sex set forth in standard works in osteology (Bass 1971, Brothwell 1972, Ubelaker 1972).

Ageing criteria

- 1) Dental development
- 2) Synostosis of cranial bones
- 3) Epiphyseal fusion

Table 4. Long bone measurements

Burial no.	Age	Sex	Humerus		Ulna		Radius		Femur		Tibia		Fibula	
			R	L	R	L	R	L	R	L	R	L	R	L
68-12	20-25y	F	22.55	27.85		22.00 ⁺	22.05	22.20	38.00 ⁺	39.00 ⁺				32.45 ^r
68-11	30-40y	M				25.55	23.90							
68-13	adult	M							42.30					
68-15	35-40y	M	31.00 ⁺		26.10	25.85			41.00 ⁺	41.00 ⁺	36.00 ⁺	37.00 ⁺	34.70 ^r	
68-19	06-08y	?	18.00 ⁺			15.50 ⁺		13.65	24.60 ⁺	24.10 ⁺	19.70 ⁺	19.70 ⁺	19.80 ⁺	19.90 ⁺
68-2	06-08y	?		15.10 ^e							16.80 ^e	17.05 ^e	16.30 ^e	16.45 ^e
68-20	04-06mths?		07.20 ^e	07.30 ^e	06.70 ^e	06.70 ^e	05.95 ^e	05.95 ^e	08.75 ^e	08.85 ^e	07.20 ^e	07.10 ^e	07.00 ^e	06.95 ^e
69-1	20-30y	F	29.65		24.60			22.90						
69-3	00-03mths?		06.30 ^e	06.25 ^e	05.85 ^e	05.80 ^e	05.10 ^e	05.05 ^e	07.40 ^e	07.50 ^e	06.50 ^e	06.50 ^e	06.35 ^e	06.30 ^e
69-2	06-08y	?	14.75 ^e	15.15 ^e	13.10 ^e	13.00 ^e	11.90 ^e	11.60 ^e			16.50 ^e		16.10 ^e	16.10 ^e
69-5	01-03y	?	10.50 ^e	10.35 ^e	09.30 ^e	09.10 ^e	08.20 ^e	08.00 ^e		13.10 ^e	10.90 ^e		10.50 ^e	
69-6	15-20y	M												29.30 ^e
69-9	10-15y	F?										25.20		
68-5/9	adults	?			25.30									
72-1	20-30y	M						23.30						
72-2	30-40y	M	28.80	28.80	24.90	24.65	23.30	23.15			34.85		33.45	33.55
73-1	07-11y	M?			16.70 ^e	16.55 ^e	15.10 ^e	14.95 ^e						23.35 ^e

Note: All measurements in centimeters

Key

⁺In situ measurements.

^e Measurement of shaft
(without fused epiphysis).

^rMeasurement on reconstructed bone.

As a result of the poor state of preservation of the remains, the method for ageing and sexing the skeletons did not include osteometrics and is based entirely on the macroscopic observations on certain anatomical characteristics. The criteria used to estimate the age and determine the sex are those set forth in standard works in osteology (Genovés 1962, Krogman 1962, Bass 1971, Brothwell 1972, Ubelaker 1978), and include:

• Ageing criteria

- 1) Dental development
- 2) Synostosis of composite bones
- 3) Epiphyseal union
- 4) Development of pubic symphysis
- 5) Dental attrition
- 6) Degenerative processes
- 7) Suture closure

Sexing criteria

- 1) Pelvis form
- 2) Pelvic features
- 3) Cranial features
- 4) General robusticity

Since, with the exception of Genovés' work, the results of the other general guidelines were obtained from the study of other human populations (or ethnic groups), their use is limited when applied to Mesoamerican remains. At the same time, however, the lack of a sufficiently large and complete burial series from the Valley of Oaxaca has not allowed for the establishment of, for example, degrees of sexualization or more reliable correlations between age--obtained from the development of pubic symphysis--and dental attrition.²² Table 5 presents the list of the burials and the series of criteria used in the estimation and determination of age and sex. Except for some few cases, the diagnostics of age and sex are not based on single criteria, but rather were derived from the weight of several of them.

Besides analyzing the remains for the purpose of identifying minimal number of individuals, ageing and sexing them, the skeletons were studied in order to identified possible genetic anomalies, pathological conditions, and cultural practices inflicted directly or indirectly upon the bones. Unfortunately, by the time the osteological analysis was conducted, I was not extensively familiar with the literature on non-metric variables (Finnegan and Faust 1974, Brothwell 1981),

Table 5.- Criteria used in the ageing and sexing of the Lambityeco material

Burial no.	Ageing criteria							Sexing criteria			
	dental development	synostosis of composite bones	epiphyseal union	development of pubic symphysis	dental attrition	degenerative processes	suture closure	pelvis form	pelvic features	cranial features	General robusticity
61-1					x		x			x	
67-1A					x			φ	x	x	
67-1B					x		x	φ		x	x
68-1	x							—			
68-2	x	x						—			
68-3				x [†]	x						x
68-4	x	x						—			
68-5/9			x ^Ω	x ^τ		x ^τ		φ [§]	x	x	x
68-10	x							—			
68-11					x	x ^τ	x	φ [§]	x	x	
68-12			x				x	φ [§]	x	x	
68-13							x			x	
68-14					x	x ^δ		—			
68-15		x [∞]		x [†]	x	x ^τ	x	φ [§]	x	x	
68-16	x							—			
68-17							x			x	
68-18							x			x	
68-19	x	x						—			
68-20	x							—			
68-21		x									x
68-22					x				x	x	
68-23/25			x ^Ω		x	x ^τ				x	
69-1			x	x [†]	x		x	φ	x	x	x
69-2	x	x						—			
69-3	Δ							—			
69-5	x	x						—			
69-6		x [∞]	x							x	x
69-7	x	x						—			
69-9	x	x						§	x		
69-15					x	x ^τ	x			x	x
69-17	Δ		x [∞]					—			
70-2							x			x	
72-1		x ^{∞*}				x [‡]	x		x	x	
72-2				x ^τ		x ^τ			x	x	
72-3							x			x	x
72-4			x					—			
72-5					x	x ^τ				x	x
72-6						x ^τ				x	
72-7		x [∞]						—			
72-9			x					φ	x	x	x
73-1	x	x								x	
73-2		x							x		
73-3				x [†]			x			x	
73-4	x	x					x [⊖]			x	
73-5				x [†]			x			x	
73-6			x							x	
73-7	x	x						—			
73-8		x	x					—			
73-9	x	x						—			
73-10	Δ	x						—			
73-12	x	x						—			
73-13			x				x			x	x
73-14			x								x
73-15A			x								x
73-15B			x					—			
73-16			x ^Ω				x		x	x	x
77-1						x ^ψ	x			x	x
77-2+						x ^ψ	x				x
77-3+					x					x	
77-4+	—							—			
77-5		x [∞]	x ^Ω				x		x	x	
77-6		x	x					—			
77-7	x	x						—			
77-8	x	x						—			
81-1	x	x						—			
81-2	x							—			
81-3							x			x	
81-4			x ^Ω							x	
81-5			x					—			

Note: Burial 69-4 (same as 61-1)
 69-16 (same as 61-1)
 69-8 (not collected)
 69-10/13 (Brawbehl series)
 69-14 (does not exist)
 70-1 (not collected)
 72-8 (dog burial)
 73-11 (dog burial)
 78-1 (not analyzed)

† Source: Lynne A. Schepartz

Δ Age estimated by size of remains

∞ Based only on the sacrum

‡ Based only on the axis

∞ The completion of synostosis in all corresponding bones was used as ageing criterion

* The acromion is not fused (18-19 years), but the sternal end of clavicle is (+ 25 years)

Ω This criterion was used in the sense that all the bones that underwent epiphyseal union show complete fusion of all their constituent parts

τ According to McKern and Steward (Krogman 1962:101-103)

† According to Todd (ibid.:92-94)

τ Vertebral disease (osteoarthritis)

δ Fusion of phalanges (arthritis)

ψ Alveolar absorption

‡ The non-presence of degenerative processes was used as ageing criterion

⊖ Baso-occipital suture

φ Refers to the form of greater sciatic notch

§ Refers to the criterion of composite arch (Genovés 1962:103)

and therefore, these were not recorded systematically. I decided then, to exclude from the present study, the isolated data obtained on the subject. Due to time limitations, the data on pathological conditions has also been omitted and only occasional information is provided when describing some of the plates.

Considering the number of individuals making up the burial series in relation to the population estimate of 2,200 persons for Lambityeco between 550 and 800 A.D. (Peterson, personal communication to Lind), the sample represents only 4% of that estimation. However, based on the age distribution of the remains and on the derived age specific death rates, a U-shape mortality curve tends to be formed as expected in a representative sample (Fig. B). From the figure, it can be noted that the U-shape curve was approximately obtained only if the age specific death rate for all adults, i.e. adults of known and unknown age, was computed. Moreover, such computation was derived by using 42.5 as the mid-year number of the adult population, which means an age range between 20 and 65 years. According to Acsádi and Nemeskéri:

The U-shape curve of mortality expresses the age-dependent rules of mortality. The shape of the curve is basically determined biologically, but the vertical arrangement of its values, minor variations of this shape, and, to a certain extent, its horizontal extension are determined mainly by social and economic factors (1970:27).

However, the drastic deviations in figure B of the age specific death rates for mature adults and old adults seem to be determined mainly by two factors: 1) the limitations of the ageing procedures employed, and 2) the probable under-representation in the sample of these two adult categories. With respect to the former, the oldest age identified in the remains was of 65 years. There is no doubt that some individuals

Fig. B- Mortality in Lambityeco. Based on the burial sample so far excavated from the site

Age specific death rates:

$$M_x = \frac{Dx}{Px}$$

where M_x = the mortality of people aged x
 Dx = the number of persons died at age x
 Px = the mid-year number of the population aged x

1) $M_i = \frac{15}{2}$ (7.50)

2) $M_{ch} = \frac{13}{9}$ (1.44)

3) $M_{ju} = \frac{3}{17}$ (0.12)

4) $M_{ya} = \frac{14}{27.5}$ (0.50)

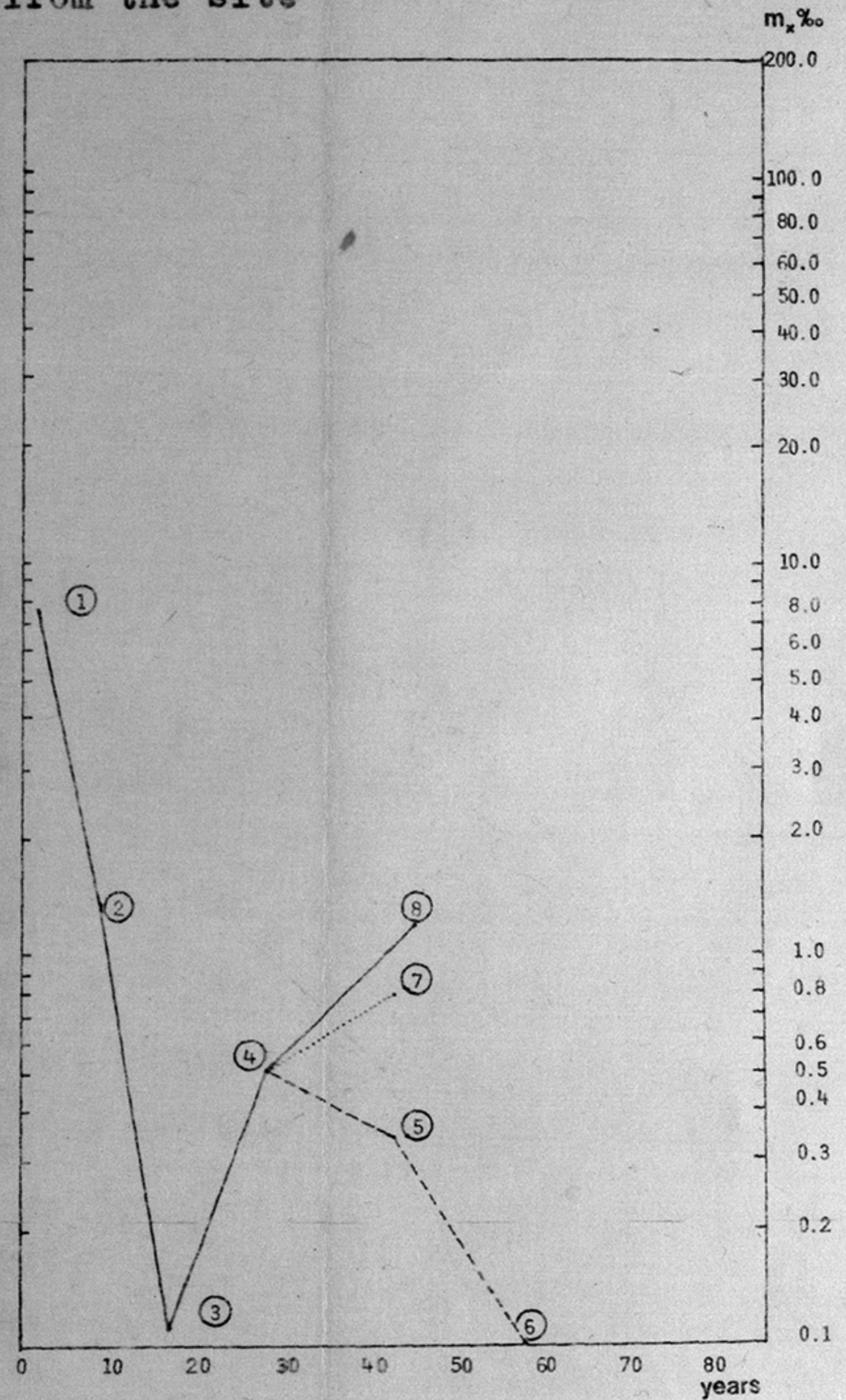
5) $M_{ma} = \frac{15}{42.5}$ (0.35)

6) $M_{oa} = \frac{5}{57.5}$ (0.08)

7) $M_{aa} = \frac{34}{42.5}$ (0.80)

8) $M_{ag} = \frac{56}{42.5}$ (1.31)

- Refers to the mortality of adults of known age
- *Refers to the mortality of all adult individuals



at Lambityeco reached older ages than that. Coupled with this limitation is the state of preservation of the remains, which did not allow more precise ageing for 22 adult individuals. Some corrections can be done if these adults of unknown age--19 of which came from tombs--are distributed among the mature and old age categories. If a total of 22 mature adults is assumed, the age specific death rate would rise from 0.35 to 0.51, and if 20 old adults is assumed, the corresponding age specific death rate rises from 0.08 to 0.34.

With respect to the probable under-representation of mature and old adults, it should be mentioned that not all the possible burials within the Lambityeco household clusters have been recovered. Considering these two factors, the present drastic deviations in the mortality curve might probably disappear, strengthening the argument that burials are mainly within domestic contexts and suggesting the non-existence of a cemetery.

For comparative purposes, the age and sex distributions of the Lambityeco sample are presented in Table 6 together with the distributions of those attributes in other burial series from the Valley of Oaxaca. From the table, it is evident that in the Lambityeco sample females are substantially under-represented (19.3%), but at the same time, the individuals of unknown sex make up a very high percentage (48.8%). Female under-representation is evident in all the Post Formative burial series, and seems to be the result of error in the sexing procedures. Weiss (in Brothwell 1981:59), for example, has suggested that there is a 12% bias in favour of males when sexing archaeological collections. Regarding the Monte Albán series, Wilkinson and Norelli, however, tend to interpret such under-representation--more evident in the tomb sample--as the result of differential burial practices (1981:752), suggesting that females were usually excluded from being buried in the tombs.

Considering the high frequency of individuals of unknown

Table 6.- Age and Sex Distributions of Burial Series
from the Valley of Oaxaca

Burial series	No.	Sex	Subadults	Adults known age	Adults unknown age	Totals
Early Formative Oaxaca †*	22	Male	—	—	—	—
		Female	—	—	—	—
		?	—	—	—	—
		Subtotals	50.00%(11)	50.00%(11)	—	100 %
Tomaltepec Cemetery † (Early Formative)	80	Male	—	—	—	31.2%(25)
		Female	—	—	—	31.2%(25)
		?	—	—	—	37.5%(30)
		Subtotals	13.4 %(7)	86.6 %(45)	—	100 %
Middle Formative Oaxaca †	42	Male	—	—	—	—
		Female	—	—	—	—
		?	—	—	—	—
		Subtotals	45.2 %(19)	54.8 %(23)	—	100 %
Monte Albán (IIIB-IV) •†	197	Male	1.0 %(2)	30.4 %(64)	20.8 %(37)	52.2%(103)
		Female	3.5 %(7)	12.2 %(24)	10.7 %(21)	26.4%(52)
		?	7.1 %(14)	.5 %(1)	13.7 %(27)	21.3%(42)
		Subtotals	11.6 %(23)	45.2 %(89)	43.1 %(85)	100 %
Lambityeco (IIIB-IV)	88	Male	5.7 %(5)	20.5 %(18)	5.7 %(5)	31.9%(28)
		Female	2.3 %(2)	13.6 %(12)	3.4 %(3)	19.3%(17)
		?	28.4 %(25)	4.5 %(4)	15.9 %(14)	48.8%(43)
		Subtotals	36.4 %(32)	38.6 %(34)	25.0 %(22)	100 %
Classic Oaxaca ■	83	Male	—	—	—	36.1%(30)
		Female	—	—	—	27.8%(23)
		?	—	—	—	36.1%(30)
		Subtotals	32.5 %(27)	67.5 %(56)	—	100 %
Post Classic Oaxaca ■†	31	Male	—	—	—	32.3%(10)
		Female	—	—	—	25.8%(8)
		?	—	—	—	41.9%(13)
		Subtotals	41.9 %(13)	58.1 % (18)	—	100 %

Sources: (†) Whalen 1983; (•) Wilkinson and Norelli 1981; (■) Autry 1973

Notes: (*) Does not include the Tomaltepec Cemetery Series.

(†) Some burials included also in the Classic and Post Classic burial Series.

(††) Includes five burials from Lambityeco

sex in the Lambityeco sample, the limitations in the sexing procedures employed in the analysis of the collection, and the bias adduced by Weiss, more equality in the male-female ratio is expected. This ratio is usually not 1:1 in real populations, and should not be necessarily expected in skeletal ones. As a result, it has been assumed that the tombs at Lambityeco most probably do not differ in the equality of representation of both sexes. This assumption, in turn, has led to the consideration that conjugal pairs (household heads of each generation) were accorded a burial place in the household tomb, whereas the other family members were interred under the houses, or outside of their limits but within the confines of the household unit.²³

3. Open access, in this sense, that the central patio was not covered by a roof. Since the houses might not have had windows, the open central patio could have been the only source of ventilation and light for the adjoining rooms.
4. Of these, only the closed and single-compound A type has not been found at Lambityeco. However, a house falling into this type was excavated by Winter at Monte Albán (cf. Winter 1974b:984, fig.3; or Flannery 1983b:136).
5. At any rate, in order to give an idea of the size of Formative household clusters compared to some of the Lambityeco ones, the estimated area for an entire Early or Middle Formative household unit at Tierras Largas (300 sq m) (Winter 1976:25) is approximately that covered by just a double-compound house. The total area covered by a household unit with such type of structure is, nevertheless, unknown.
6. System 195 covers an area of 2,686 sq meters, whereas Systems III and IV and the one at Quiengola, cover--respectively-- (and approximately) 3,074; 4,646; and 4,087 sq meters. The pyramidal platforms of systems III, IV, and most probably that at Quiengola too, supported temples.
7. It should be noted that the extensive erosion to which

the mounds at Lambityeco have been subjected, especially because of plowing, might account for the complete obliteration of some structures.

The conjunctive use of the criteria of layout, size, and construction materials might enable us in the future to develop a more accurate typology of residential structures.

NOTES

1. It should be noted that no Post Formative cemetery has been yet found in the Valley of Oaxaca.
2. According to Flannery (1983a:45), the term 'household cluster' should be substituted for that of 'household unit' in order to avoid confusion with the terms employed by Maya archaeologists to designate certain types of settlement patterns, e.g. 'major and minor aggregate clusters' or 'cluster of houses' which refer to hamlets and villages. Since the semantic domain of the term 'household cluster' has been clearly stated in the text (See page 5), there is no reason why such possible confusion should arise. In fact, in the present thesis both terms--household cluster and household unit--are used as synonyms to avoid overrepetition of either one.
3. Open means, in this sense, that the central patio was not covered by a roof. Since the houses might not have had windows, the open central patio could have been the only source of ventilation and light for the adjoining rooms.
4. Of these, only the closed and single-compound A type has not been found at Lambityeco. However, a house falling into this type was excavated by Winter at Monte Albán (cf. Winter 1974b:984, fig.3; or Flannery 1983b:136).
5. At any rate, in order to give an idea of the size of Formative household clusters compared to some of the Lambityeco ones, the estimated area for an entire Early or Middle Formative household unit at Tierras Largas (300 sq m)(Winter 1976:25) is approximately that covered by just a double-compound house. The total area covered by a household unit with such type of structure is, nevertheless, unknown.
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the mounds at Lambityeco have been subjected, especially because of plowing, might account for the complete obliteration of some structures.

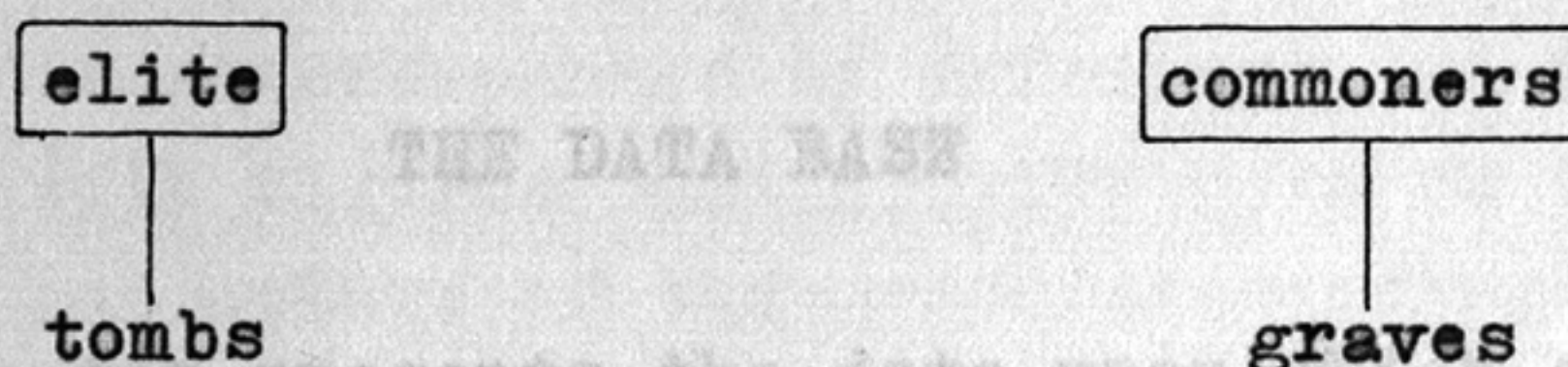
8. The conjunctive use of the criteria of layout, size, and construction materials might enable us in the future to develop a more accurate typology of residential structures.
9. Howells comment cited before reminds us that archaeology, by the nature of its data, cannot attain strict degrees of contemporaneity.
10. Blanton has estimated a population of 30,000 inhabitants for Monte Albán before its major abandonment (1978:58). Peterson estimates a maximum population of 2,200 persons for Lambityeco between 550 and 800 A.D.
11. Unfortunately, two of the tombs--those associated with the first and last phases of construction in the mound--were found empty in terms of human remains. The estimated occupation is based on the assumption that only one generation made use of each tomb.
12. The only exceptions are mounds 195 and 190 and the household units found in the flat area immediately north of system 195. The first two have been tentatively correlated by means of architectural and artistic (iconographical) characteristics (Lind and Urcid 1983), and the first and third, by means of some stratigraphical relations and by ceramic characteristics (idem.)
13. However, not all these include substantial offerings, and some lack the kind of objects necessary to conduct a seriation.
14. Until now, only one burial (68-2) has been clearly found in a post-abandonment context (See page 94). Since the proposed aim of the present thesis has been chronologically delimited between A.D. 550 and A.D. 800, this burial--although described in chapter 2, will not be considered for further analysis.
15. The use of the term 'superimposed household cluster' is just an abstract device used only to define more clearly each household unit. It is obvious that such thing does not occur in reality since the occupation of a locality was rather a continuum.
16. Except for the layout of houses 4 and 1 at mound 190, those for the remaining houses and some of their dimensions (See figs. 10, 12a, and 13a) are purely hypothetical. None of these figures include entrances to the residences nor accesses between Patio Complexes.

17. Not counting burial 68-2
18. Selective removal of anatomical sections has been proposed at least in the case of tomb 6 (Mound 195), where the osteological and iconographic evidence related to it, suggests the consecutive removal of the femora of male individuals (Lind and Urcid 1983).
19. The plate shows a reconstructed portion of the skull found in the south niche of the first chamber of tomb 6 (See also accompanying drawing). The outer table is characterized by the exposure of the diploë in extended and irregular areas, and by the presence of more or less circular perforations that reach the inner table. There is no bone reaction in the surrounding areas nor evidence of growth (thickening) of the spongy tissue. In certain parts, meager traces of red paint are discernable over the exposed diploë. The condition does not seem to be of pathological origin but rather the result of erosion and insect disturbances.
20. These disturbed remains might have been the source of the worked human bones so far found at Lambityeco. These total six objects, all of them made from different portions of the skull.

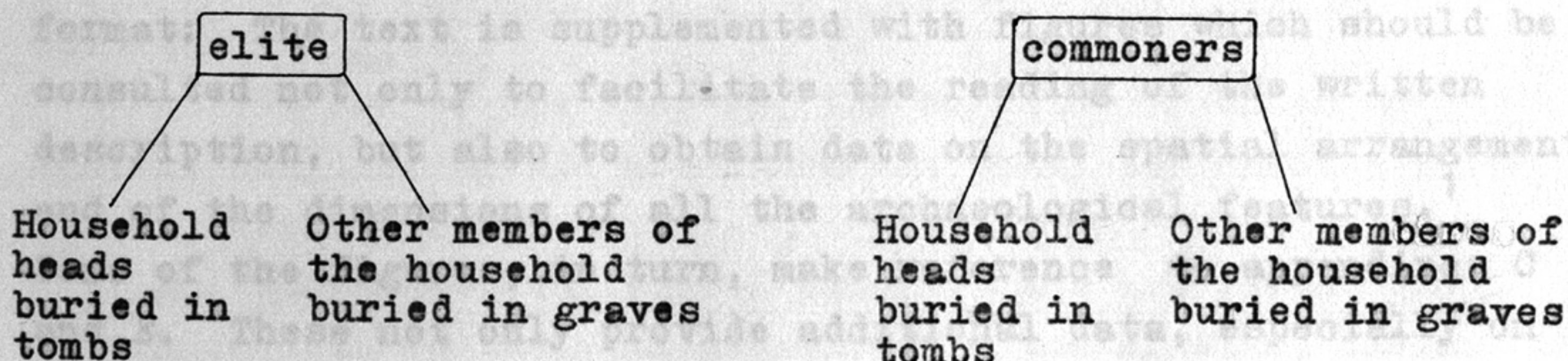
Obj. no.	Provenience	Form	Anatomical section	Comments
1507	Noguera's pit (Mound 190)	Incomplete Perforated disk	Parietal (?)	Partially burnt. Made from an infant's skull
6817	Tomb 2	Perforated disk	Occiput	Made from an adult's skull
25684	Pit 10 of Fowler's stratigraphical survey	Trapezoid plaque	Left parietal	Made from an adult's skull
25696	"	Perforated disk	Parietal (side ?)	Made from an adult's skull
—	Burial 73-7	—	Left maxilla	The anatomical section was cut above the alveolar process
—	Burial 77-8	Oblong plaque	Occiput	Made from a child's skull

21. Since the osteological analysis was conducted between five and ten years after the burials were recovered, some of the *in situ* measurements could not be checked because of the already fragmented state of bones that once were complete.
22. The results of biological studies conducted on contemporary Zapotec populations (Himes and Malina 1975, Malina et al 1976) might prove helpful in the study of prehistoric osseous materials, although socio-economic and nutritional factors were not the same in prehispanic times.

23. This interpretation, if valid, makes the dichotomy of tomb burials as reflecting high status vs. grave burials as reflecting low status a very simplistic one, or at least a differentiation valid at the level of the household. If differences in status are to be discovered at the level of the community, comparisons should be made between tombs. This argument can be illustrated in the following way:



Social model based on the dichotomy of tombs vs. graves



Social model proposed for the Lambityeco burials